

ANDRÉ VITO SCATIGNA (ORCID [orcid.org/0000-0002-8874-2206](https://orcid.org/0000-0002-8874-2206), [andrescatigna@gmail.com](mailto:andrescatigna@gmail.com)) and FRANCISCA HELENA MUNIZ (ORCID [orcid.org/0000-0001-8511-7424](https://orcid.org/0000-0001-8511-7424)) Centro de Educação, Ciências Exatas e Naturais, Departamento de Biologia, Universidade Estadual do Maranhão, São Luís, Maranhão, Brazil

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## Failing badger protection

Despite legal protection (Protection of Badgers Act 1992), 105,960 badgers were culled in the UK during 2018–2020 as part of bovine tuberculosis control measures, with licences currently issued to remove up to a further 75,930 badgers commencing 1 June 2021. Nevertheless, developments interfering with badger setts still require licence from Natural England, often necessitating that ecological consultancies mitigate any destructive effects. When a sett impedes intended development, ecological consultancies are contracted to assess the feasibility of replacement with an artificial substitute. There is, however, no legal requirement stipulating that such setts should be adopted, beyond proof the badgers have investigated their new accommodation. In response to our data request of 8 February 2021, Natural England was unable to confirm how many of 1,471 licences granted during 2019–2020 required the construction of artificial setts to replace those closed down or whether any replacement setts subsequently supported breeding.

Surveying ecological consultancies via the British Ecologists Facebook Group during 19 May–15 June 2021, we established that only 10 of 29 respondents were required by Natural England to conduct follow-up monitoring of the artificial setts they constructed; eight additional artificial setts were monitored of the consultant's own volition. Of these 18 setts, breeding was detected at only eight. The success rate is likely to be lower among consultants involved in artificial sett construction who did not respond to our survey. Many artificial setts fail either because the sett is not located within the territorial range of the disenfranchised badger group, as a result of a lack of territorial baitmarking surveying, or because the sett is not sited and constructed in the correct soil substrate to achieve the underground complexity and thermal stability badgers require, especially for breeding success (Tsunoda et al., 2018, *Journal of Thermal Biology*, 74, 226–233). With culling, traffic accidents and direct persecution already exerting a c. 20% additional mortality burden on the UK's c. 485,000 badgers (Judge et al., 2017, *Scientific Reports*, 7, 276), this is an underappreciated issue that needs urgent attention. Every effort should be made to ensure that investments in conservation mitigation are effective; simply demonstrating compliance with minimal

criteria does not serve intended welfare or conservation goals.

DANIEL WOOD (ORCID [orcid.org/0000-0001-9516-155X](https://orcid.org/0000-0001-9516-155X)) ACD Environmental Ltd, Malmesbury, UK. CHRISTINA BUESCHING (ORCID [orcid.org/0000-0002-4207-5196](https://orcid.org/0000-0002-4207-5196)) Department of Biology, The University of British Columbia, Kelowna, Canada. CHRIS NEWMAN (ORCID [orcid.org/0000-0002-9284-6526](https://orcid.org/0000-0002-9284-6526), [chris.newman@lmh.ox.ac.uk](mailto:chris.newman@lmh.ox.ac.uk)) Wildlife Conservation Research Unit, Department of Zoology, University of Oxford, Oxford, UK

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## Habitats of the Endangered Caspian seal identified as Important Marine Mammal Areas

The Caspian seal *Pusa caspica* lives only in the landlocked Caspian Sea in western Asia. Since 2008 it has been categorized as Endangered on the IUCN Red List, having declined by > 70% in the 20th century, primarily as a result of unsustainable hunting for the species' fur and blubber. On 6 December 2021, the IUCN Task Force on Marine Mammal Protected Areas, a joint task force of the IUCN Species Survival Commission and the World Commission on Protected Areas, announced that three Important Marine Mammal Areas have been identified for the Caspian seal as part of 14 new such areas for the marine mammals of the Black Sea, Turkish Straits and Caspian Sea (see [marinemammalhabitat.org/imma-eatlas](https://marinemammalhabitat.org/imma-eatlas) for further details).

The main threats to Caspian seals stem from human activities, including high rates of seal mortality in fishing gear set for sturgeon poaching, and habitat degradation arising from coastal development. The newly identified Caspian Sea Important Marine Mammal Areas are not protected but are essential habitat for the species. Currently, there are no protected areas designated specifically for the conservation of the Caspian seal that prohibit all forms of economic or industrial activity. It is hoped that this new initiative will stimulate the development of stronger protection for key Caspian seal habitat, including winter breeding ice, migration routes, foraging areas and sites used for haul out on land for resting and moulting. Increasing levels of disturbance have caused Caspian seals to abandon most of their traditional haul-out sites. The formerly large aggregations of the species are now rarely seen.

The Caspian seal was added to the national Red Book of Russia and the List of Rare and Endangered Species of Plants and Animals of Kazakhstan in 2020, making it Red Listed in all five Caspian countries. Following a proposal initiated by the Islamic Republic of Iran, the Caspian seal was added to Appendices I and II of the United Nations Convention on the Conservation of Migratory Species of Wild Animals in 2017.



The Endangered Caspian seal *Pusa caspica*. Photo: Nataliya Shumeyko.

ERICH HOYT ([orcid.org/0000-0001-6946-4055](https://orcid.org/0000-0001-6946-4055), [erich.hoyt@imma-network.org](mailto:erich.hoyt@imma-network.org)) Co-chair, IUCN Marine Mammal Protected Areas Task Force, and Whale and Dolphin Conservation Association, Chippenham, UK

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## A range-wide conservation action plan for the European bison

In 2004, the IUCN Species Survival Commission Bison Specialist Group published a *European Bison Status Survey and Conservation Action Plan* (Belousova et al., 2004, *IUCN/SSC Action Plans for the Conservation of Biological Diversity*, IUCN, Gland, Switzerland). By 2020, there were c. 6,800 European bison *Bison bonasus* in 47 free-ranging subpopulations across 10 countries, c. 500 in semi free-living conditions, and c. 1,700 in ex situ facilities. The 2020 IUCN Red List assessment (Plumb et al., 2020, *The IUCN Red List of Threatened Species 2020*, e.T2814A45156279) recategorized the species from Vulnerable to Near Threatened, with ongoing threats highlighted (low genetic diversity, small population size and habitat fragmentation). In early 2022, the Bison Specialist Group and European Bison Conservation Center will co-publish a strategic status review, as noted by Olech et al. (*Oryx*, 2019, 53, 214).

Progress has been made in improving knowledge about the species and in implementing actions that have increased its abundance and distribution, yet there is a diversity of viewpoints on what future success for the species might look like. Consequently, the Bison Specialist Group, European Association of Zoos and Aquaria, European Bison Conservation Center, Rewilding Europe, WWF, Tierpark Berlin, Humboldt University–Berlin, and Polish Academy of Sciences–Mammal Research Institute have agreed to collaborate on a European Bison Range-wide Conservation Action Plan, facilitated by the IUCN Species

Survival Commission Conservation Planning Specialist Group. The Plan will adopt the One Plan approach, which emphasises participation by a broad range of stakeholders and integrates in situ and ex situ population management activities into a coherent set of conservation strategies and actions.

The Plan will follow the Conservation Planning Specialist Group's Species Conservation Planning Principles and Steps (CPSG, 2020, *Species Conservation Planning Principles & Steps*. Version 1.0. IUCN SSC Conservation Planning Specialist Group, Apple Valley, USA), use the best available science and information to assess the prevailing circumstances, and recommend priority near-term actions (over 10 years) that advance the long-term strategic direction (over 100 years) towards recovery of the species within its historical range. The Plan will also consider how habitats outside the historical range could play a role in that recovery, considering possible future climatic and land-use changes that could influence the longer-term adaptability and resilience of the species. Key issues to be addressed include population viability through maintaining natural selection mechanisms; habitat availability and fragmentation; human–wildlife coexistence; metapopulation viability and management; genetics; integration of in situ and ex situ management; wildlife health; role of feeding, hunting and culling; climate change; policy and legislative consistency; captive breeding; and adaptive management. During 2022, the planning process will include stakeholder analyses, online and in-person workshops, and new population viability analyses. The Plan, to be published in 2023, will provide a scientifically rigorous strategic framework to inform subsequent additional national and sub-regional plans and actions that collectively will contribute to achieving range-wide goals for the European bison.

GLENN PLUMB ([orcid.org/0000-0001-9974-0241](https://orcid.org/0000-0001-9974-0241), [iucn.bsg.plumb@gmail.com](mailto:iucn.bsg.plumb@gmail.com)) IUCN Species Survival Commission, Bison Specialist Group Chair, Livingston, USA

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## Sea Turtle Conservancy dedicates new sea turtle field station in Parque Nacional Marino Isla Bastimentos, Panama

The Sea Turtle Conservancy (formerly Caribbean Conservation Corporation) has been active in sea turtle conservation throughout the greater Caribbean since the 1950s. On 7 November 2021, Peter and Anne Meylan, research associates of the Sea Turtle Conservancy and the Smithsonian Tropical Research Institute, Cristina Ordoñez and other members of the Sea Turtle Conservancy, along with a host of beach monitors and other community members, dedicated a new field station on the Small Zapatilla Cay in the Bastimentos Island National Marine Park, Bocas del Toro Province, Panama.